

Remarks

Although certain claims have been indicated by the Examiner as withdrawn, certain of these claims have been amended to address similar issues raised on elected claims. That is, where the Examiner has objected to brackets around compound names, these brackets have been removed in all pending claims, whether withdrawn or under examination on the merits.

Objections to the Claims

Claims 5, 11, 14, 38, 44, and 47 have been objected to because they included brackets around the compound names. These brackets have been removed from these claims, and from all other claims. This amendment is believed to moot the objection.

Claim 30 was objected to on the basis that it purportedly included the phrase "help helping." The previous amendment removed the word "help" and inserted "helping" in its place. Since this change was already made, it is believed that no further action need be taken in this regard.

Rejections under 35 U.S.C. § 112, Second Paragraph

Claims 1, 2, 5, 8, 11, 14, 17-21, 29-31, 34-38, 41, 44, and 47 were rejected under 35 U.S.C. § 112, second paragraph, as indefinite.

One basis for the rejection was that the terms n_1 and n_2 in Claim 1 would cause the valency of the carbon atom to exceed four. Applicants have amended Claim 1 to delete "Z-OC (C R_{n1}R_{n2})-CO-Z" and insert, in its place, "Z-OC (C R₁R₂)_n-CO-Z," which corrects this typographical error.

Another basis for the rejection is that the "non-toxic salt" forms of the compound would constitute a composition claim rather than a compound claim. Applicants respectfully disagree, but to facilitate allowance, have amended the claims to state "or a non-toxic salt thereof" in place of "and non-toxic salts thereof." The amendment is believed to moot the rejection. Certain claims were also amended to include the "or non-toxic salt thereof" language to provide antecedent basis for salt forms appearing in later dependent claims.

Claim 17 was rejected on the basis that the term “cell surface densities” lacks antecedent basis. Claim 17 has been amended to specify that the cell surface densities of CD11c, CD80, CD54 and CD11c are on the BM leukocyte precursors that, earlier in the claim, were incubated with the claimed compounds. It is believed that this amendment overcomes this ground of rejection.

Claim 18 was rejected on the basis that there is a “fold increase” without mentioning the amount of the increase, and also on the basis that the molecules that are stimulated and the cells that are stimulated are not mentioned. Claim 18 has been amended consistent with the data shown on Column 27, paragraph 1040 and Table A, to state that the cells are BM precursor cells, the compounds are CD80, CD54, H-2D, or CD11c, and that the concentrations of these compounds are increased between 2-4 fold, relative to baseline, when the compound is administered at 50 micrograms per ml at 48 hours of incubation. It is believed that this amendment obviates the rejection.

Claim 30 was rejected on the basis that the “more efficient and faster presentation” of the antigens to T-cells was a term of degree that lacked a point of reference.

Claim 31 was rejected as it lacked the definition of the various groups in Structure 1. Structure 1 has been removed from the claim, leaving the reference to Claim 2. A similar amendment has been made to Claims 32 and 33.

Claim 36 was rejected based on the recital of “different divalent metal cations such as mg, Ca and Zn.”

Claim 37 was rejected on the basis that it was purportedly unclear which salts were intended. Applicants have amended the claim to specify that the composition includes amino acids, dicarboxylic acids, or an alkali/ alkaline earth metal salt thereof. It is believed that this amendment clarifies the subject matter being claimed.

Rejections under 35 U.S.C. §§ 102 (a)/103 (a)

Claims 1, 2, 29, 31, 34, 35 and 37 were rejected under 35 U.S.C. § 102 (a) as anticipated by Lehninger et al., Principles of Biochemistry (“Lehninger”), and Claims 17-21 were rejected as anticipated by, or under 35 U.S.C. § 103 (a) as obvious in view of Lehninger.

Applicants respectfully note that the compounds of Claims 1 and 2 require that at least one R group in the compound is selected from the group consisting of SO₃H, OSO₃H, CH₂--SO₃H, CH₂--OSO₃H, and NHSO₃H, and none of these groups are present in aspartic acid. Further, the claims have been amended to delete reference to aspartic acid derivatives. Accordingly, Applicants respectfully request that the rejection of Claims 1, 2, 29, 31, 34, 35 and 37 be withdrawn. With respect to the obviousness rejection of Claims 17-21, Applicants respectfully assert that Lehninger does not suggest that the various SO₃H, OSO₃H, CH₂--SO₃H, CH₂--OSO₃H, and NHSO₃H groups would impart the claimed utility to the compounds.

Claims 1, 2, 5, 8, 11, 14, 17-21, 29-31, 34-38, 41, 44 and 47 were also rejected as being anticipated by Dennis et al., *Biochemistry*, 25(7):1605-11 (1986), and Claims 1, 2, 5, 8, 9, 11, 14, 29, 31, 34-36, 38, 41, 44 and 47 were rejected as being anticipated by U.S. Patent No. 6,271,200 to Modi. Claims 17-21 and 30 were rejected as being anticipated by, or obvious over, Modi and Dennis.

Modi and Dennis disclose various aspartic acid and succinic acid sulfonates. Applicants have amended the claims to delete reference to aspartic acid sulfonates and sulfonosuccinates, and also cancelled Claims 37 and 41. This amendment is believed to moot the novelty rejection.

With respect to obviousness, Applicants respectfully assert that the references are narrowly focused on aspartic acid or succinic acid and their derivatives, and there is no motivation to modify the structure to arrive at the instantly claimed compounds.

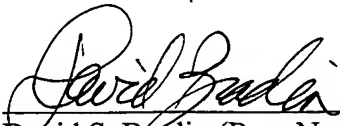
Conclusion

It is believed that the claims are currently in condition for allowance, and prompt notification of such is respectfully requested.

Respectfully submitted,

Date:

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